NASA-CR-192657

(NASA-CR-192657) THE JOINT NASA/GEOSAT TEST CASE PROJECT. PLATES: BANDPASSES OF MULTISPECTRAL SCANNERS (WAVELENGTH, MICRON), PART 3 (JPL) 63 p

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PART 3

The Joint NASA/Geosat Test Case Project

Plates

Bandpasses of multispectral scanners (wavelength, μm)

8-1. Lisbon Valley, Utah: Distribution of bleached, unbleached, and laminated members in the Wingate Sandstone outcrop, southwest flank of Lisbon Valley Anticline. Geology modified from Weir and Dodson (1958a, 1958b, 1958c), Weir, Dodson, and Puffett (1960b), and Weir, Puffett, and Dodson (1961).

8-2. Lisbon Valley, Utah: Relationships of bleached Wingate Sandstone outcrops to topography

8-3. Lisbon Valley, Utah: Cross section showing relationships of bleached and unbleached strata on the southwest limb of Lisbon Valley Anticline

8-4. Lisbon Valley, Utah: Cross-section AA''' showing the relationship between distribution of the bleached Wingate Sandstone (unit W_1) and the Lekas-Dahl (1956) "magic interval" of uranium mineralization drawn on the upper surface of the Cutler Formation

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11-2. Patrick Draw, Wyoming: Soil map of test site (after Bureau of Management, 1981). Refer to Tables 11-6 and 11-7 for explanation.

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12-2. Lost River, West Virginia: Seismic structure interpretation (Columbia Gas Transmission Corporation)

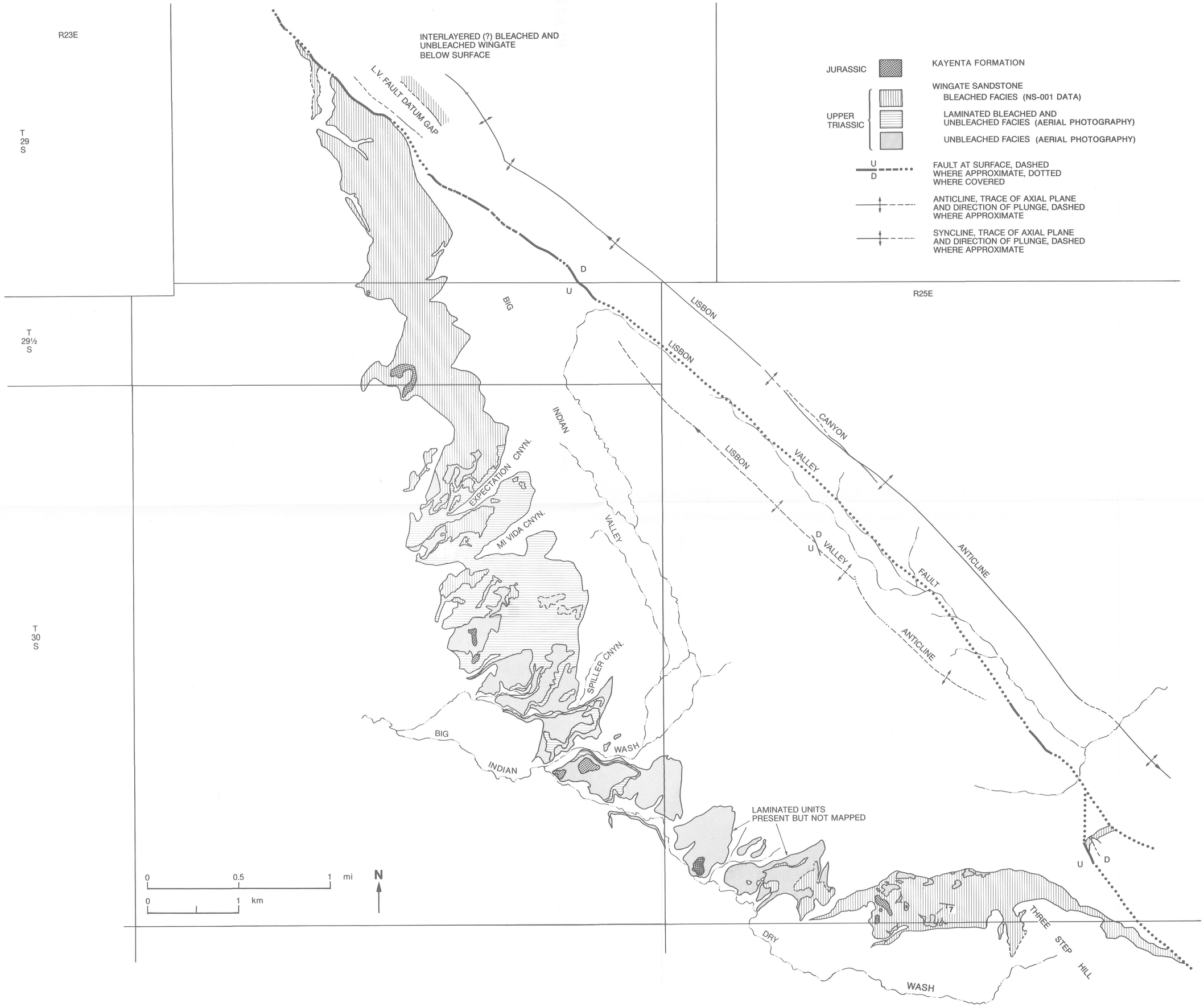
12-3. Lost River, West Virginia: Soils map (after SCS, 1979). Refer to Table 12-5 for explanation.

13-1. Coyanosa, Texas: Composite image interpretation

Bandpasses of multispectral scanners (wavelength, μm)

Landsat MSS[a]	M²S[b]	NS–001[c]	Bendix 24-Channel[d]
4 0 5–0 6	1 0 33–0 44	1 0 45–0 52	1 0 34–0 40
5 0.6–0 7	2 0 44–0.48	2 0.52–0 60	2 0 40–0 44
6 0 7–0 8	3 0 49–0 54	3 0 63–0 69	3 0 46–0.50
7 0 8–1 1	4 0.54–0 58	4 0 76–0 90	4 0 53–0 57
	5 0 58–0 62	5 1 00–1.30	5 0 57–0.63
	6 0 62–0 66	6 1 55–1.75	6 0 64–0.68
	7 0 66–0 70	7 2 08–2 35	7 0 71–0 75
	8 0 70–0 74	8 10 4–12 5	8 0 76–0 80
	9 0 76–0 86		9 0 82–0 87
	10 0 97–1 065		10 0 97–1 05
	11 8 0–13 5		11 1 18–1 30
			12 1 52–1 73
			13 2 10–2 36
			14 3 54–4 00
			15 4.50–4 75
			16 6 00–7 00[e]
			17 8 30–8 80[e]
			18 8.80–9 30[e]
			19 9 30–9.80[e]
			20 10 10–11.00[e]
			21 11.00–12 00[e]
			22 12.00–13 00[e]
			23 1 12–1 16
			24 1 05–1.09

[a] Landsat Multispectral Scanner satellite system, 4 channels
[b] Modular Multispectral Scanner aircraft system, 11 channels
[c] NS-001 Thematic Mapper Simulator aircraft scanner system, 8 channels
[d] Bendix 24-channel aircraft scanner system
[e] Channel not operational



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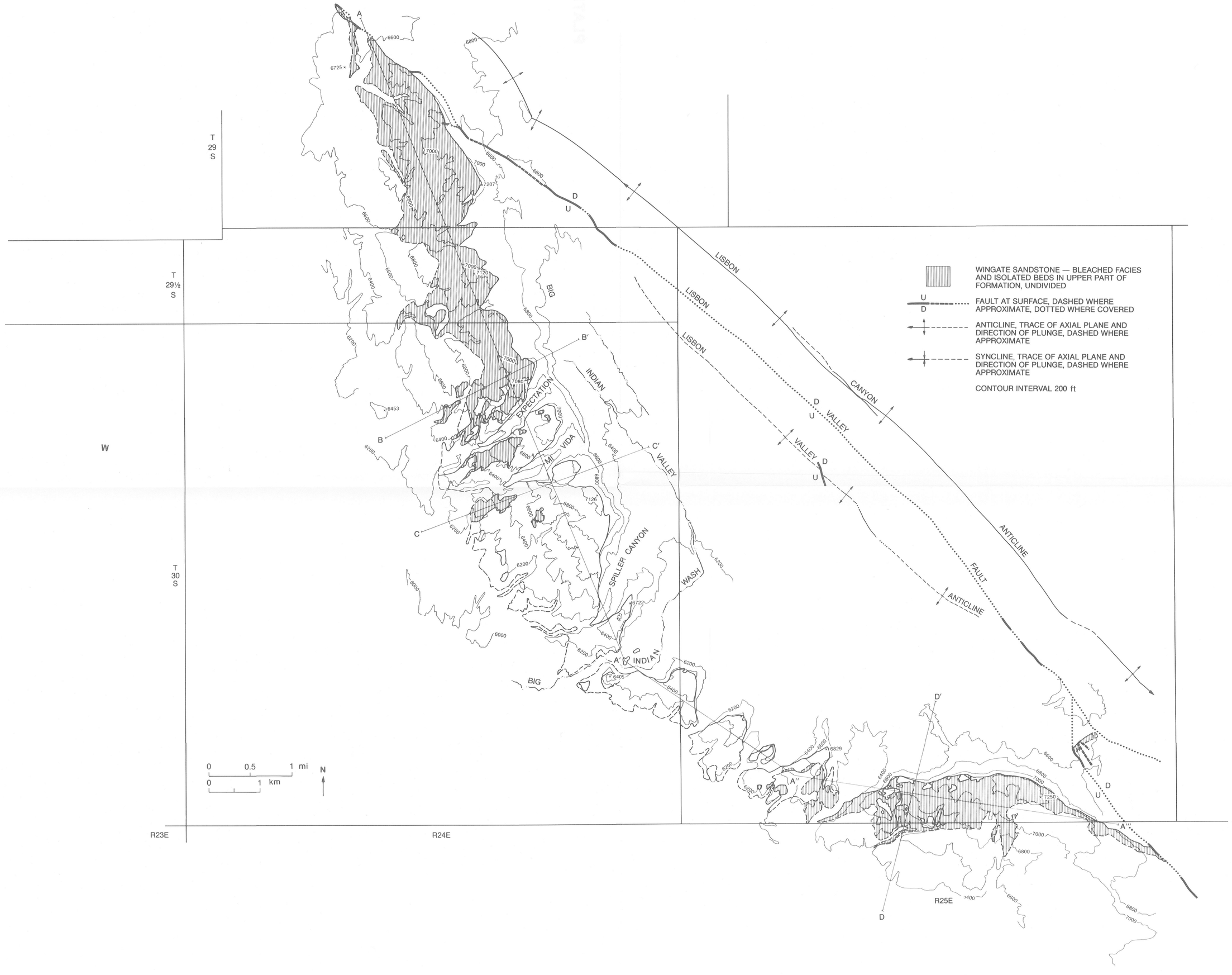

Plate 8-2. Lisbon Valley, Utah: Relationships of bleached Wingate Sandstone outcrops to topography

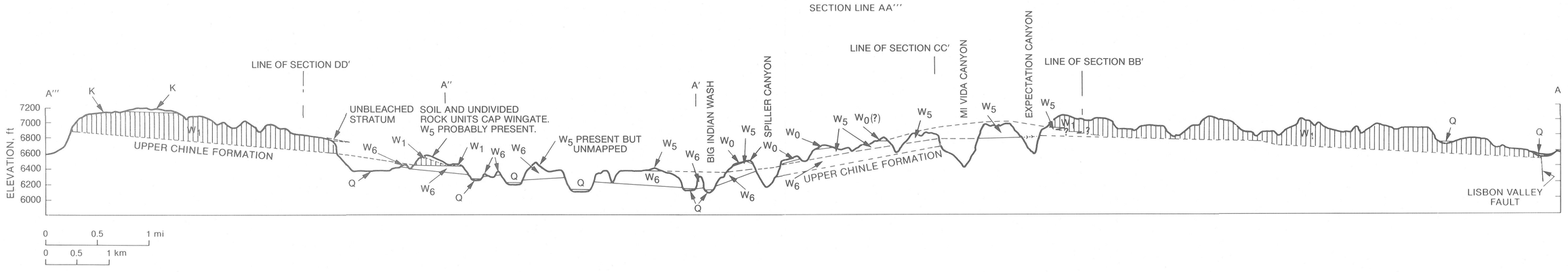

Plate 8-3. Lisbon Valley, Utah: Cross section showing relationships of bleached and unbleached strata on the southwest limb of Lisbon Valley Anticline

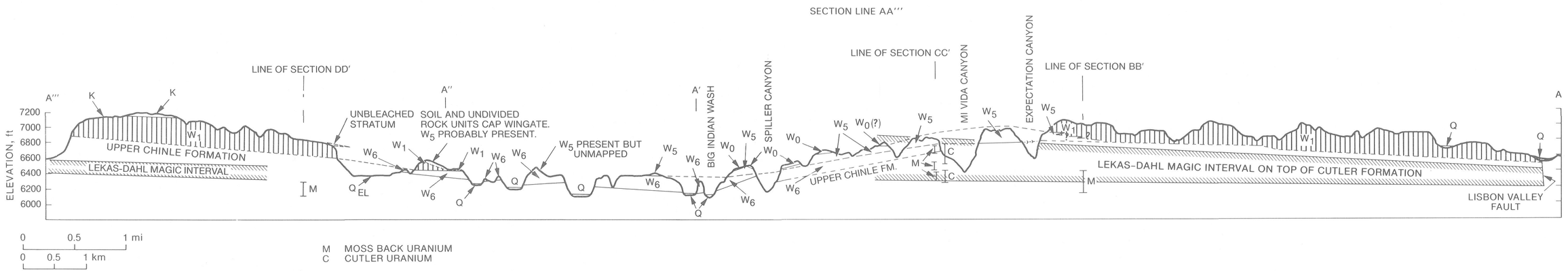

Plate 8-4. Lisbon Valley, Utah: Cross-section AA''' showing the relationship between distribution of the bleached Wingate Sandstone (unit W_1) and the Lekas-Dahl (1956) "magic interval" of uranium mineralization drawn on the upper surface of the Cutler Formation

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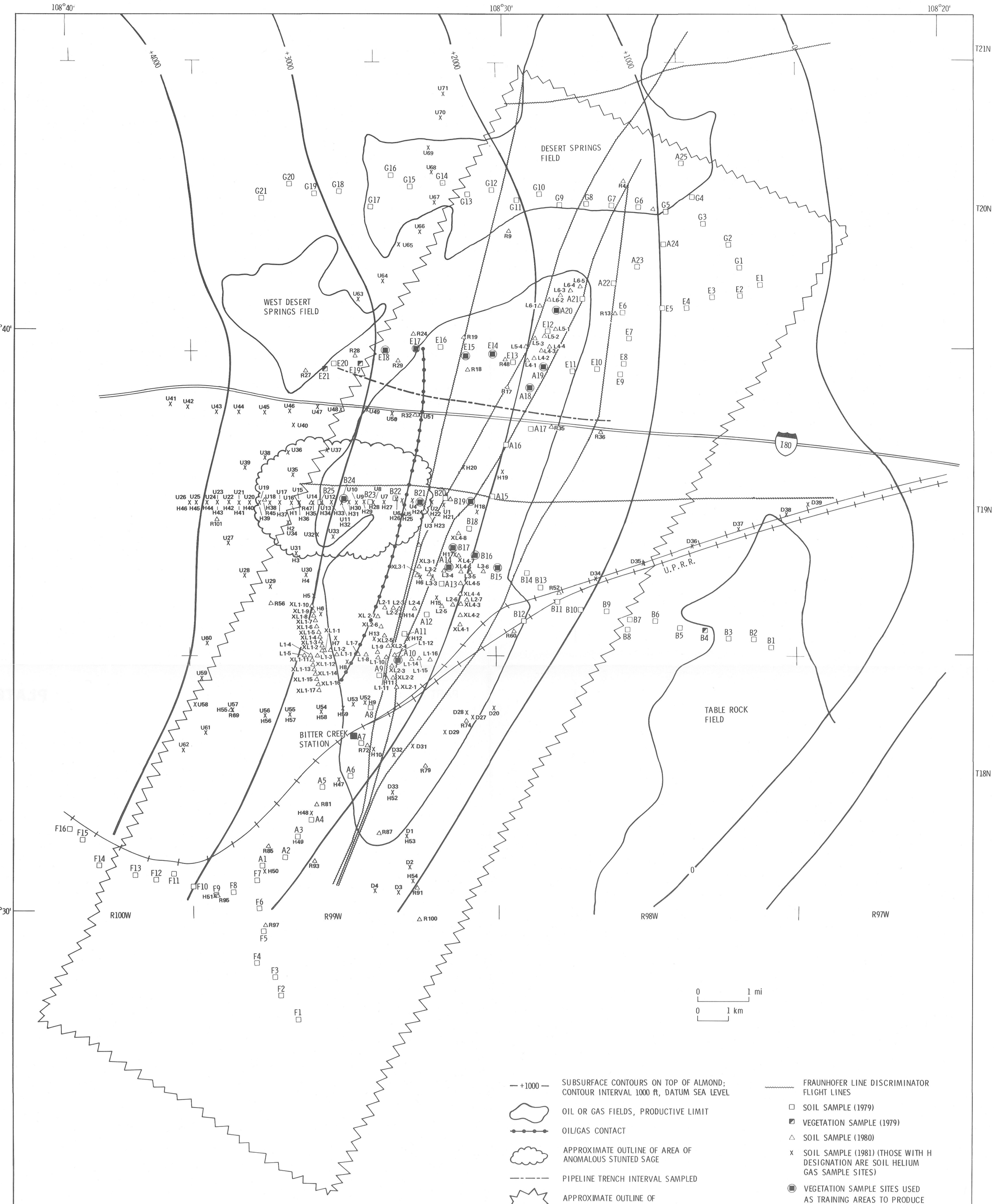
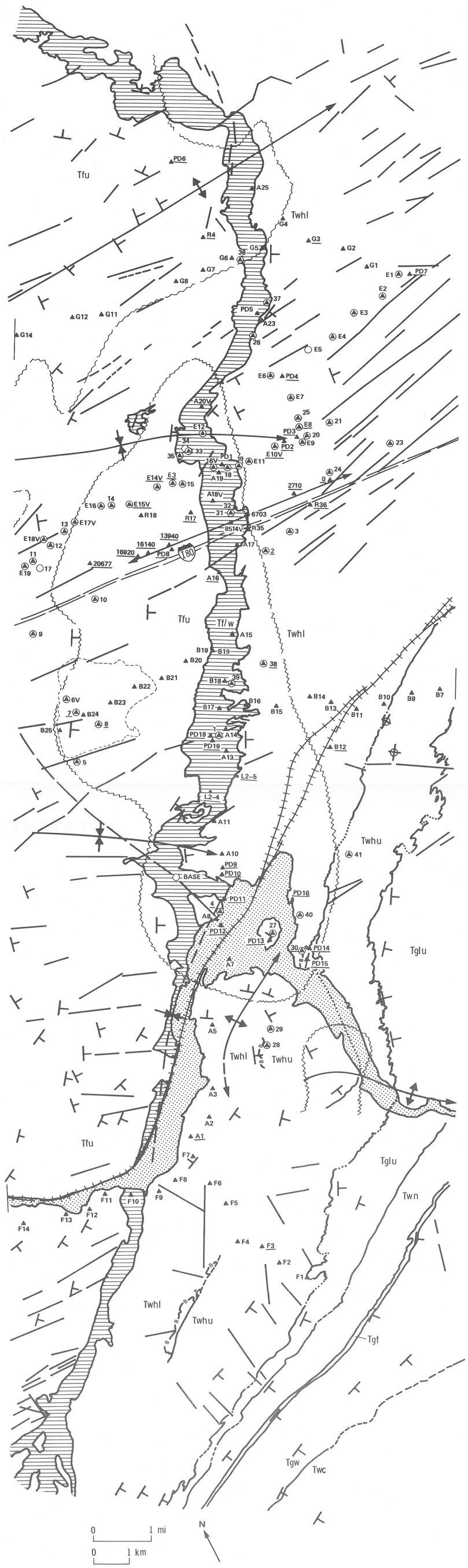


Plate 11-1. Patrick Draw, Wyoming: Map of test site showing subsurface structure and field sample locations

Plate 11-2. Patrick Draw, Wyoming: Soil map of test site (after Bureau of Management, 1981). Refer to Tables 11-6 and 11-7 for explanation.



HOLOCENE/ QUATERNARY — ALLUVIUM OF THE BITTER CREEK DRAINAGE

EOCENE
- Twc — WASATCH FORMATION CATHEDRAL BLUFFS TONGUE
- Tgw — GREEN RIVER FORMATION WILKINS PEAK MEMBER
- Tgt — TIPTON SHALE MEMBER
- Twn — WASATCH FORMATION NILAND TONGUE
- Tglu — GREEN RIVER FORMATION LUMAN TONGUE
- -B- Twhu — WASATCH FORMATION UPPER HIAWATHA MEMBER/ B MARKER BED
- Twhl — LOWER HIAWATHA MEMBER

PALEOCENE
- Tf/w — FORT UNION FORMATION WASATCH TRANSITION
- Tfu — FORT UNION MAIN BODY

- INTERSTATE 80
- UNION PACIFIC RAILROAD
- HYDROCARBON PRODUCTION OUTLINE
- VEGETATION "ANOMALY" OUTLINE
- CONTACT, DASHED WHERE INFERRED, DOTTED WHERE CONCEALED
- ANTICLINE; AXIAL TRACE AND PLUNGE, DASHED WHERE INFERRED
- SYNCLINE; AXIAL TRACE AND PLUNGE, DASHED WHERE INFERRED
- STRIKE AND DIRECTION OF DIP
- LINEAMENT
- TRENCH

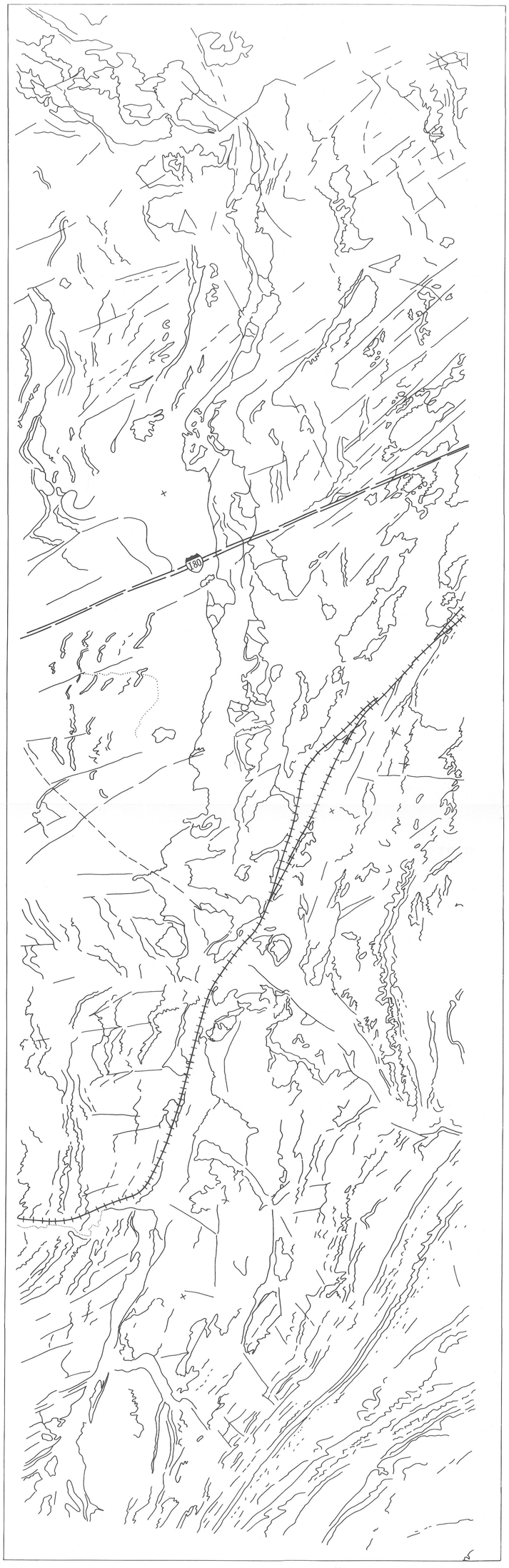
▲ LABORATORY SPECTRA SAMPLE SITES(DK2A)*

○ PFRS FIELD SPECTRA SAMPLE SITES

• A1 XRD MINERALOGY SAMPLE SITES(UNDERLINED)

*NOTE: SITES WITH "V" DESIGNATION (A18V) ARE ALSO LOCATIONS OF PERKIN ELMER 330 VEGETATION SPECTRA

Plate 11-3. Patrick Draw, Wyoming: Composite geologic interpretation of geometrically corrected NS-001 data from Mission 390, October 19, 1978



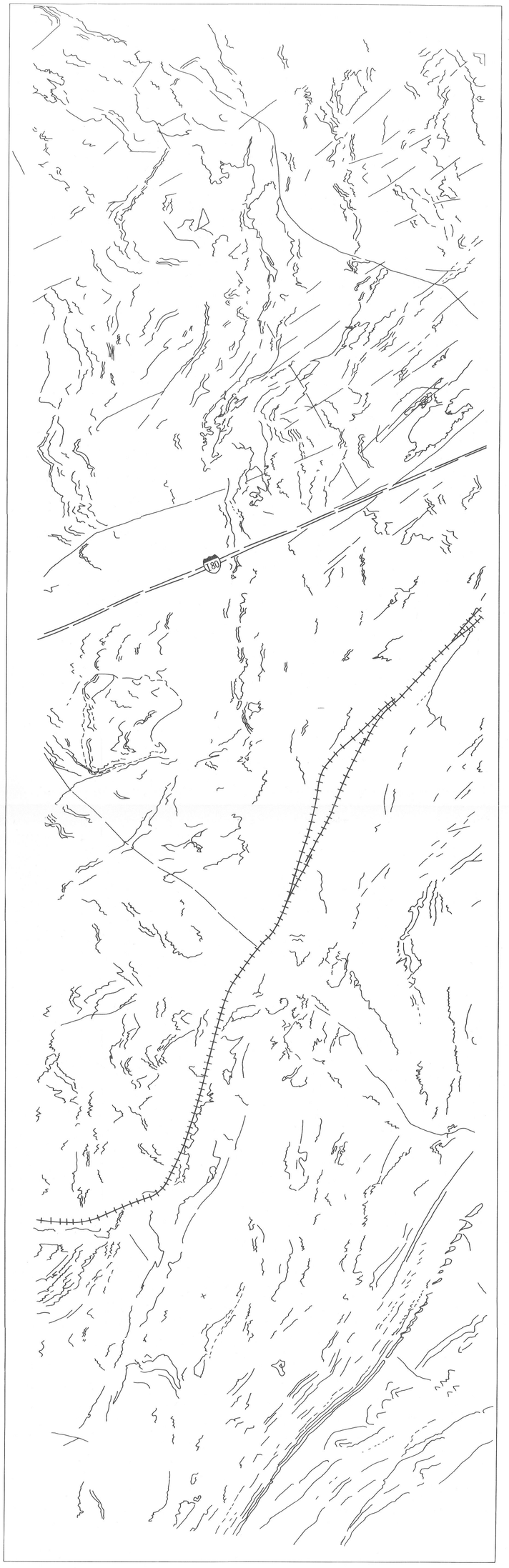


Plate 11-4. Patrick Draw, Wyoming: Interpretation of NS-001 data from Mission 390, October 19, 1978, showing traceable bedding units

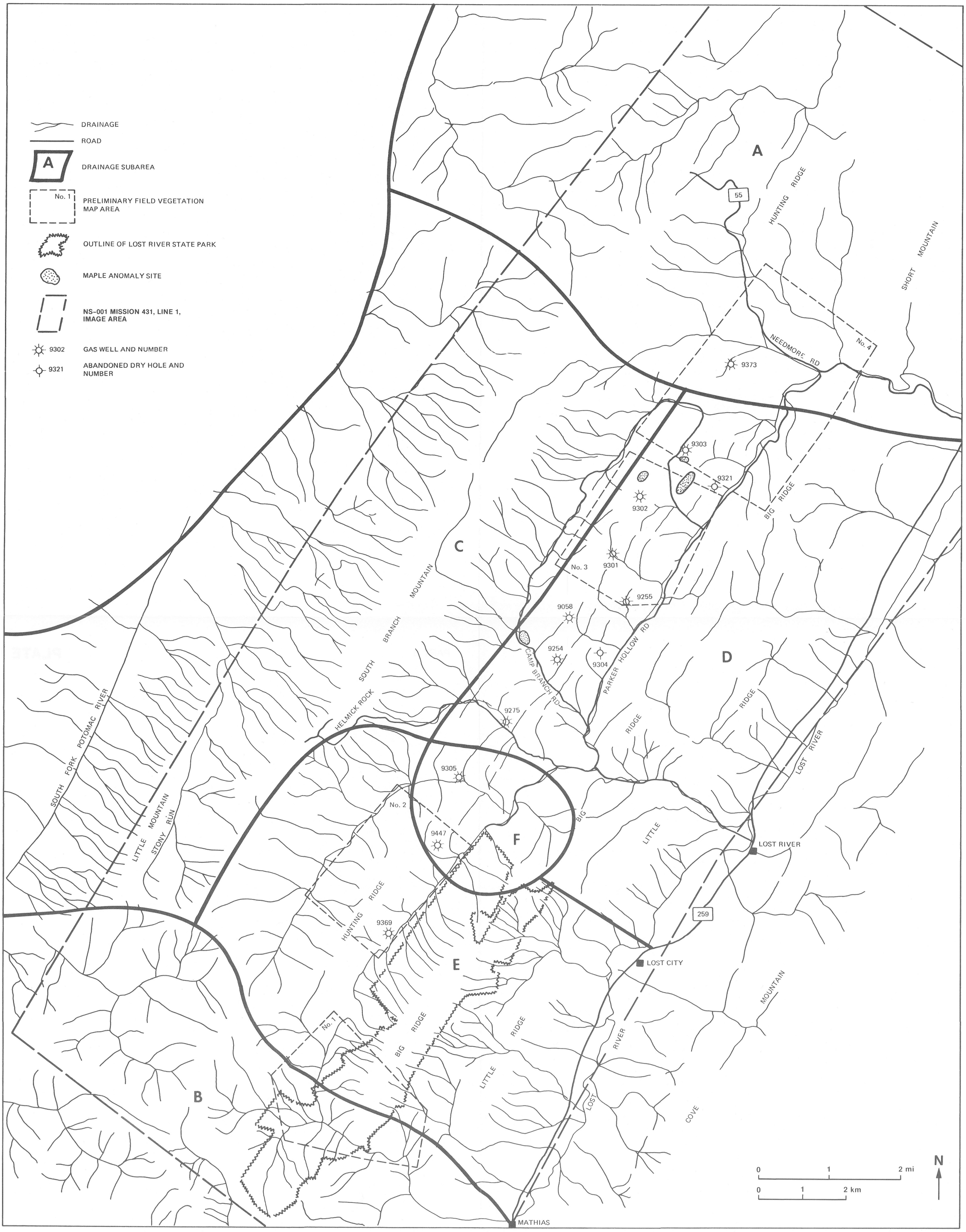


Plate 12-1. Lost River, West Virginia: Drainage map (map base after USGS 7½′ quadrangles)

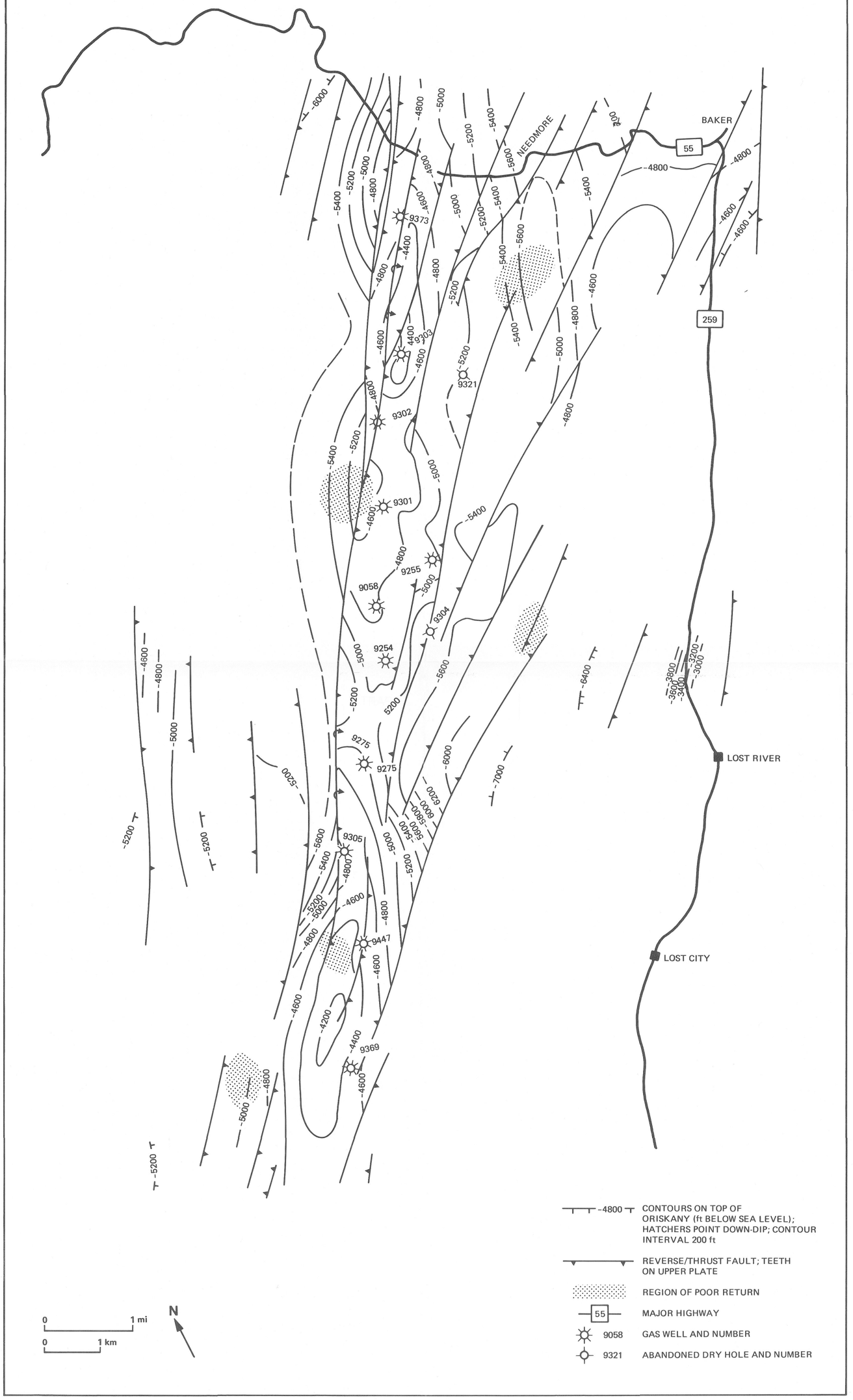
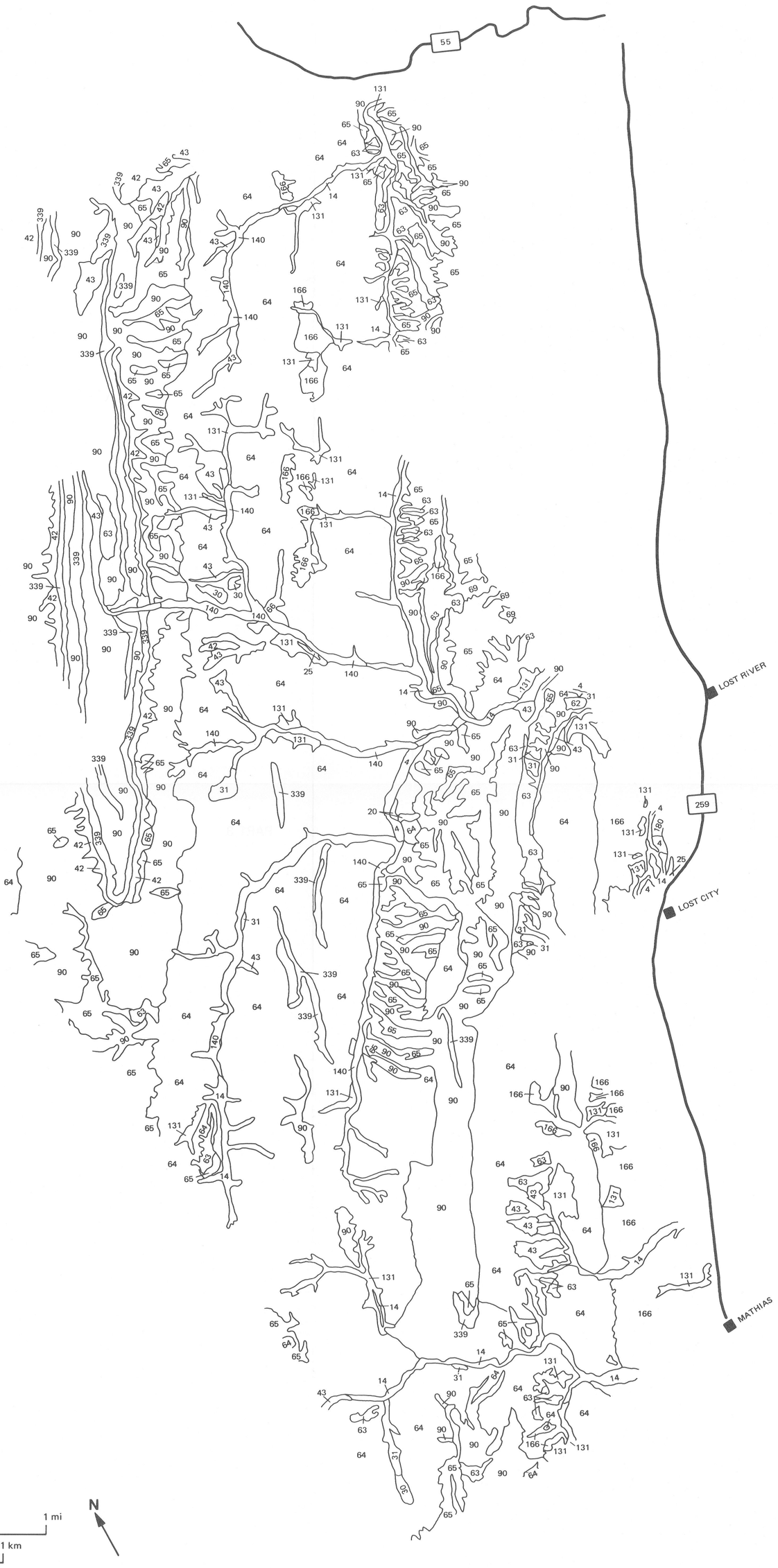


Plate 12-2. Lost River, West Virginia: Seismic structure interpretation (Columbia Gas Transmission Corporation)



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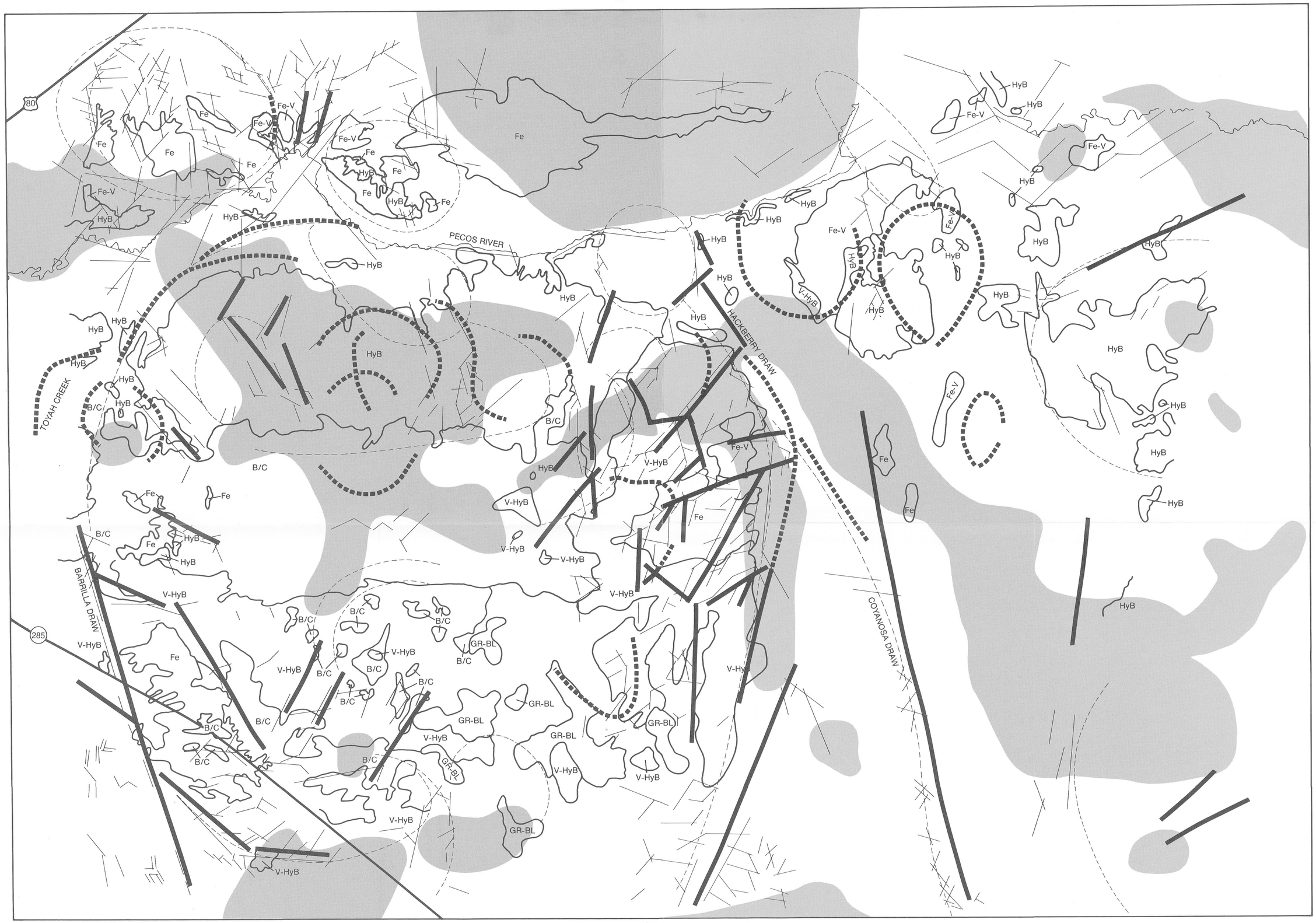

0 1 mi
0 1 km

N

COMPOSITE LANDSAT STRUCTURAL INTERPRETATION
- LINEAMENT (FAULT, FRACTURE OR JOINT SYSTEM)
- DRAINAGE DEFLECTION, CURVED SCARP OR TOPOGRAPHIC BOUNDARY

NS-001 SPECTRAL INTERPRETATION
[MISSION 403, JUNE 18, 1979: 2/3 (GREEN), 2/4 (BLUE), 6/7 (RED)]

SPECTRAL CLASS OUTLINE:

Fe	FERRIC OXIDES (IMAGE BROWN/BLACK)
Fe-V	FERRIC OXIDE AND VIGOROUS VEGETATION (LIGHT BROWN)
HyB	HYDROXYL AND/OR CARBONATE-BEARING MINERALS (PINK)
B/C	BARE GROUND AND/OR SPARSE OR DORMANT VEGETATION (BLUE/CYAN)
V-HyB	VIGOROUS VEGETATION AND HYDROXYL AND/OR CARBONATE-BEARING MINERALS (ORANGE)
GR-BL	UNKNOWN (GREENISH-BLACK)

NS-001 STRUCTURAL INTERPRETATION
[MISSION 403, JUNE 18, 1979: 2/3 (GREEN), 2/4 (BLUE), 6/7 (RED)]
- LINEAMENT (FAULT, FRACTURE OR JOINT SYSTEM)
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APPROXIMATE OIL/GAS FIELD PRODUCTIVE AREA

Plate 13-1. Coyanosa, Texas: Composite image interpretation